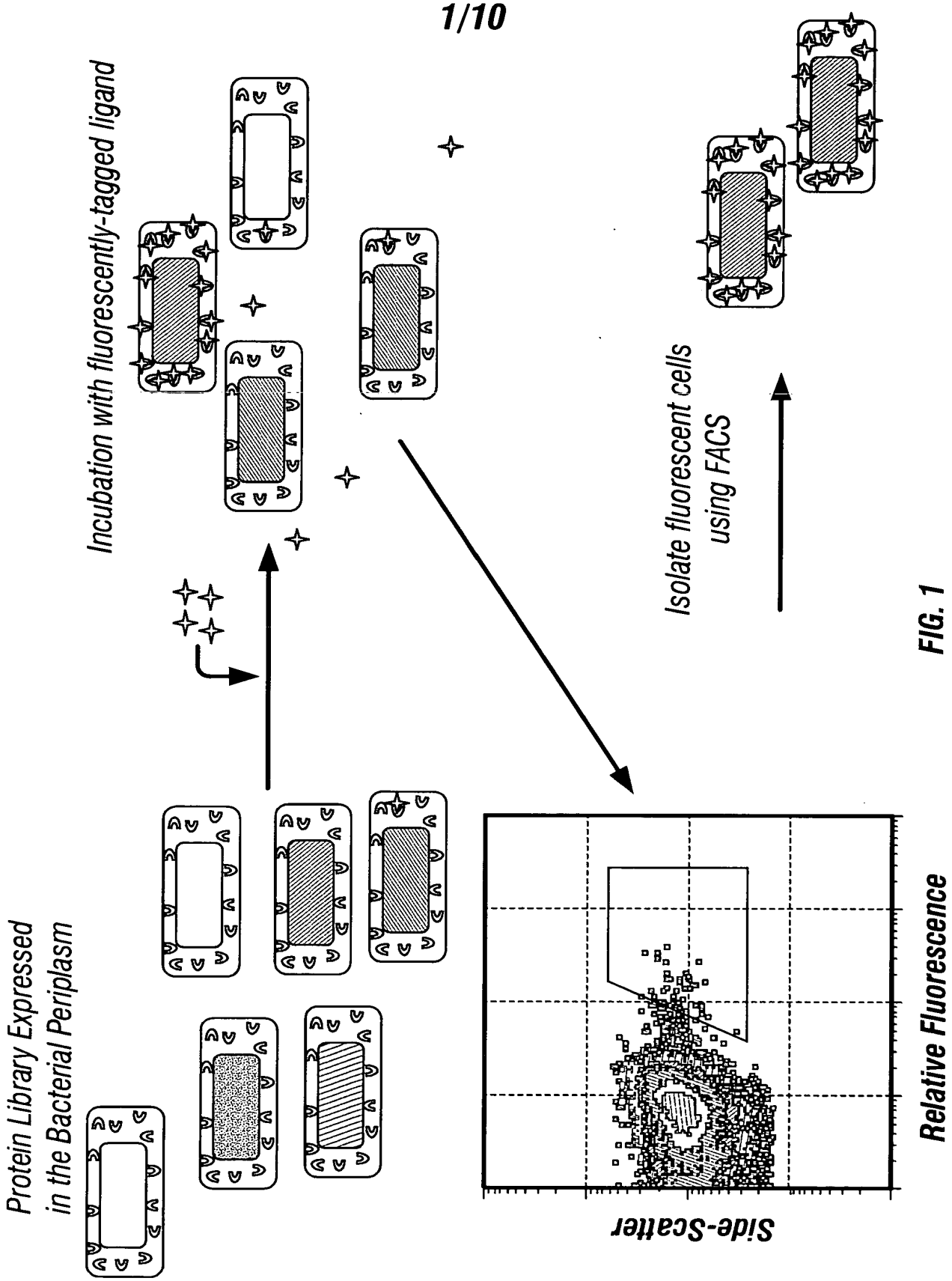

FIG. 1

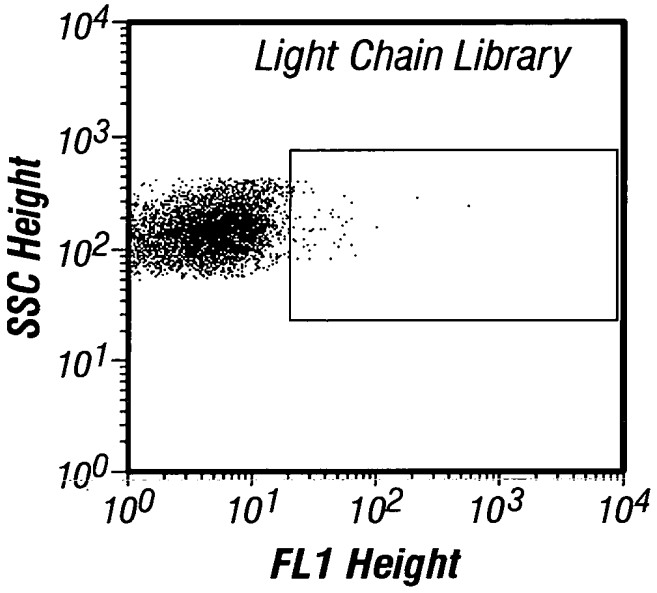

FIG. 2A

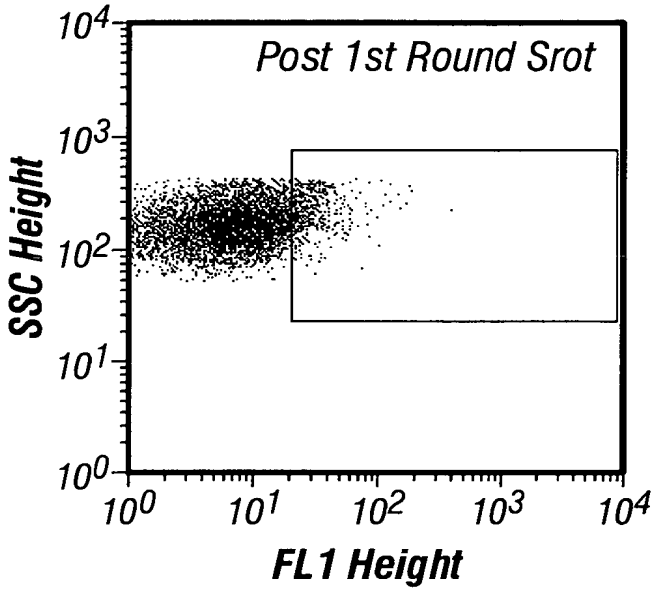

FIG. 2B

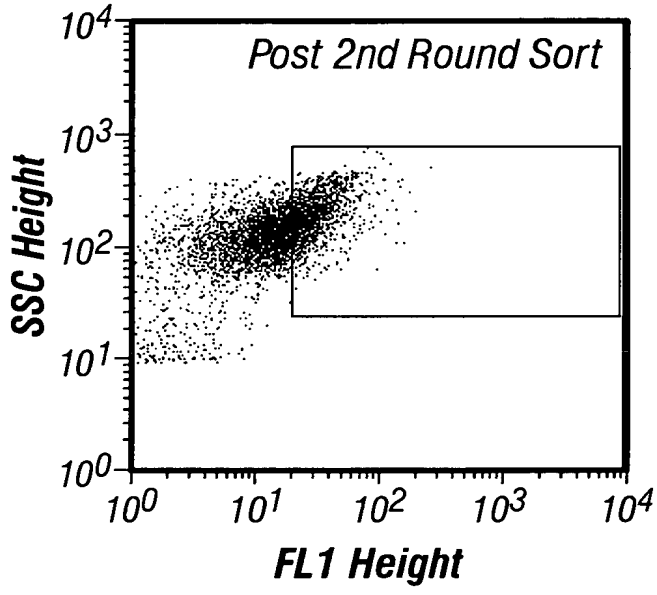

FIG. 2C

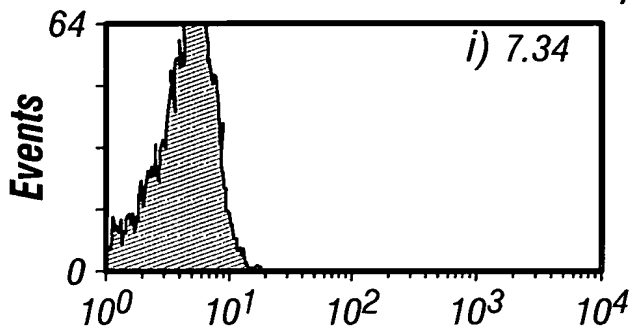

FIG. 3A

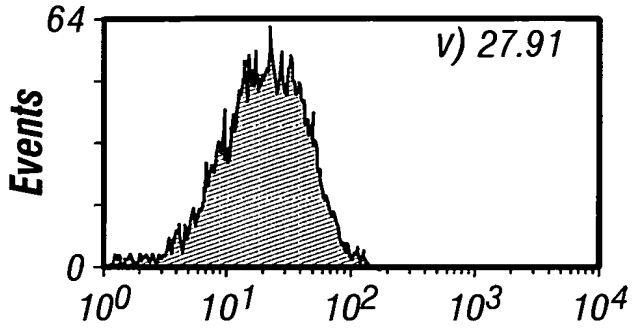

FIG. 3B

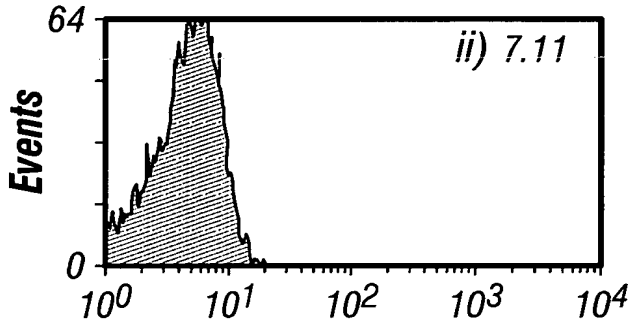

FIG. 3C

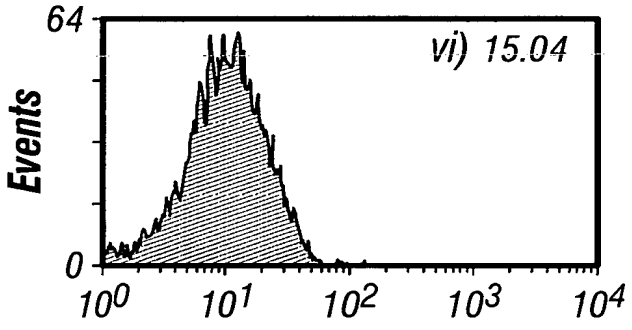

FIG. 3D

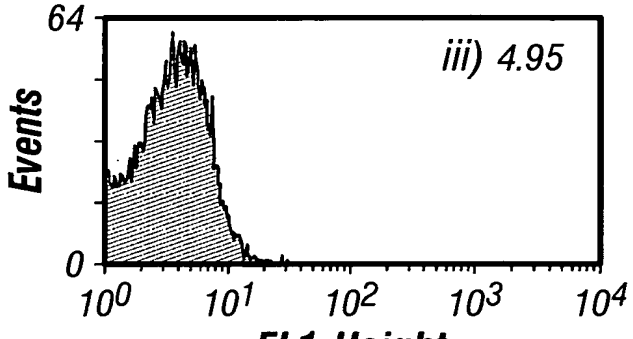

FIG. 3E

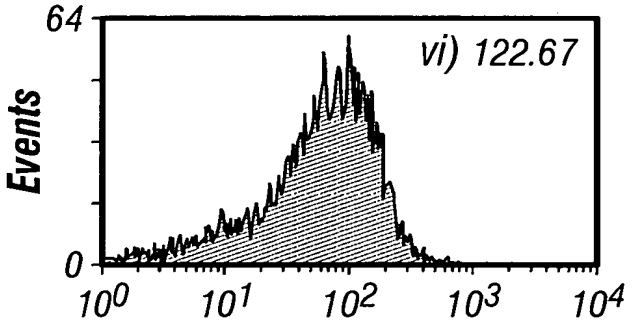

FIG. 3F

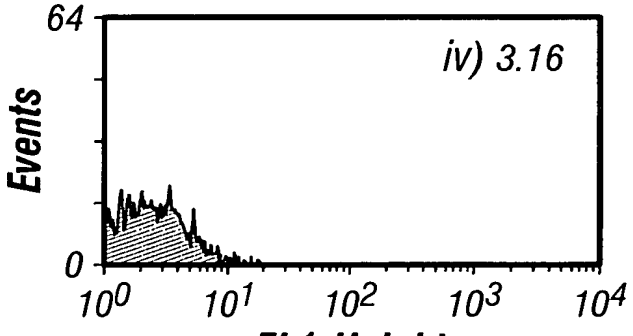

FIG. 3G

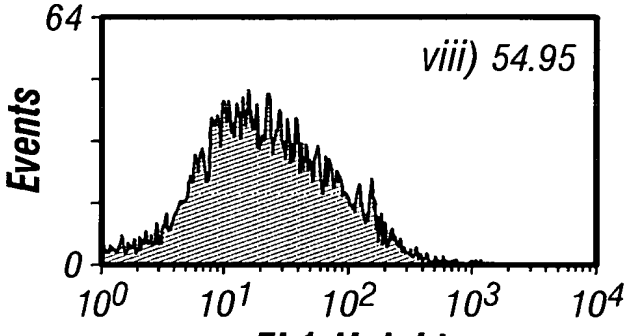

FIG. 3H

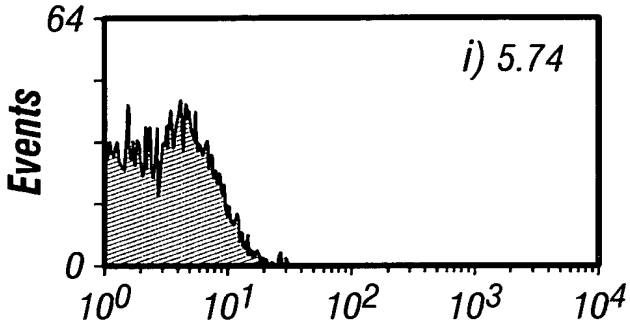

FIG. 4A

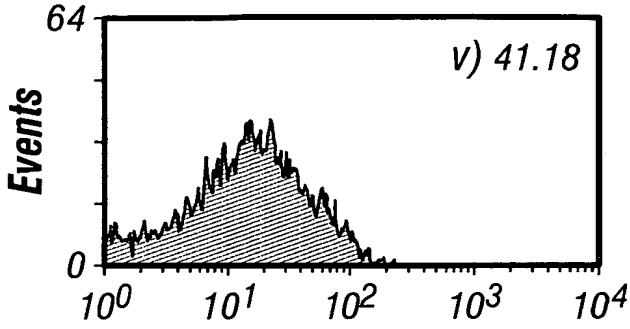

FIG. 4B

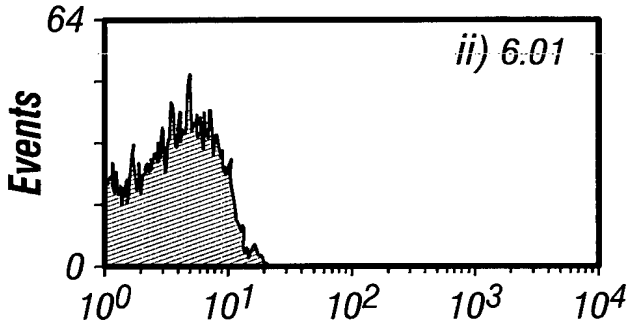

FIG. 4C

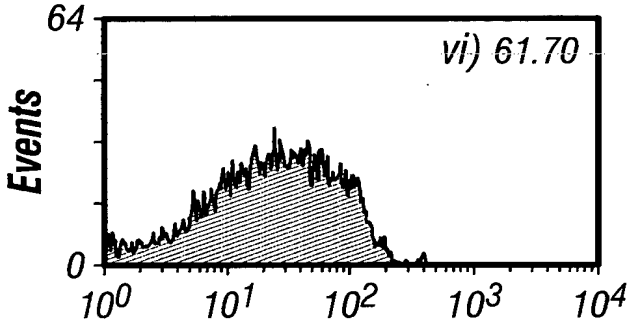

FIG. 4D

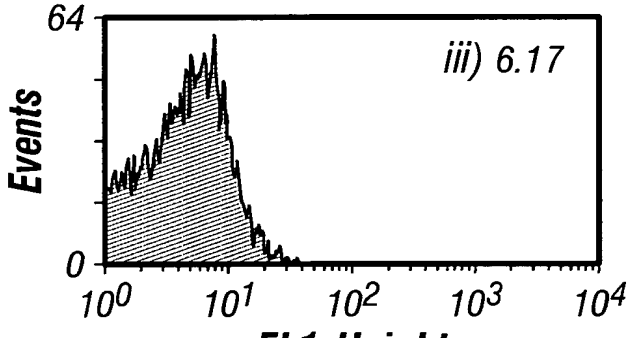

FIG. 4E

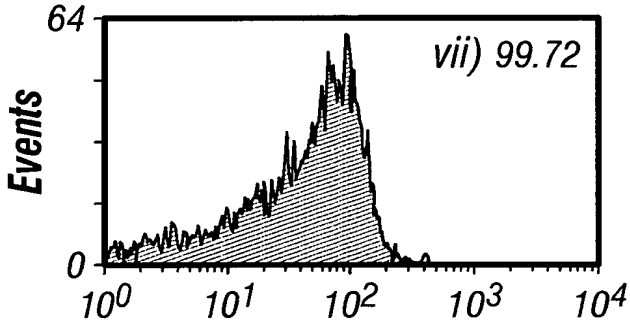

FIG. 4F

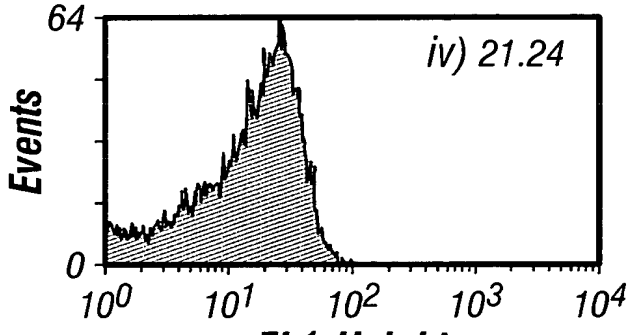

FIG. 4G

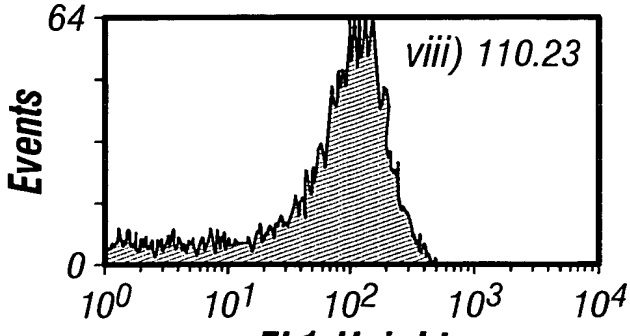

FIG. 4H

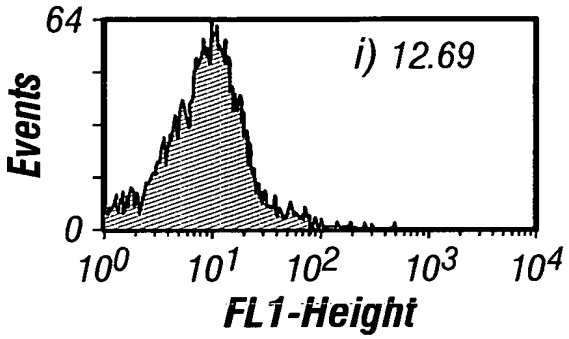

FIG. 5A

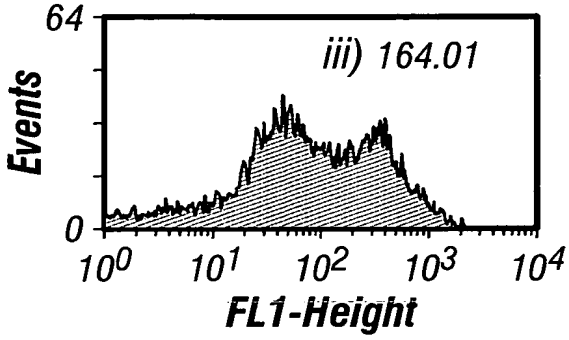

FIG. 5B

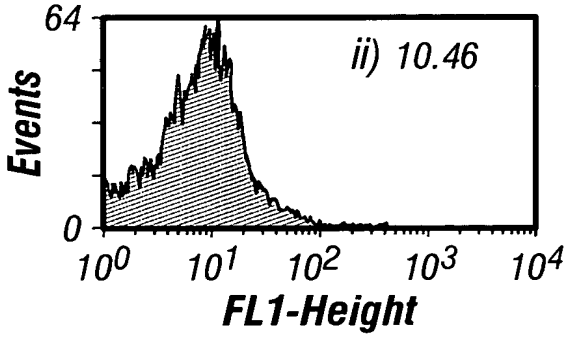

FIG. 5C

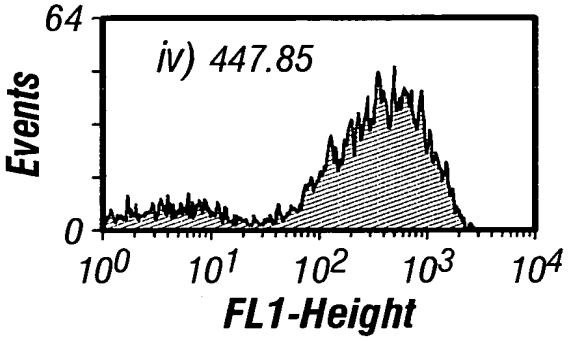

FIG. 5D

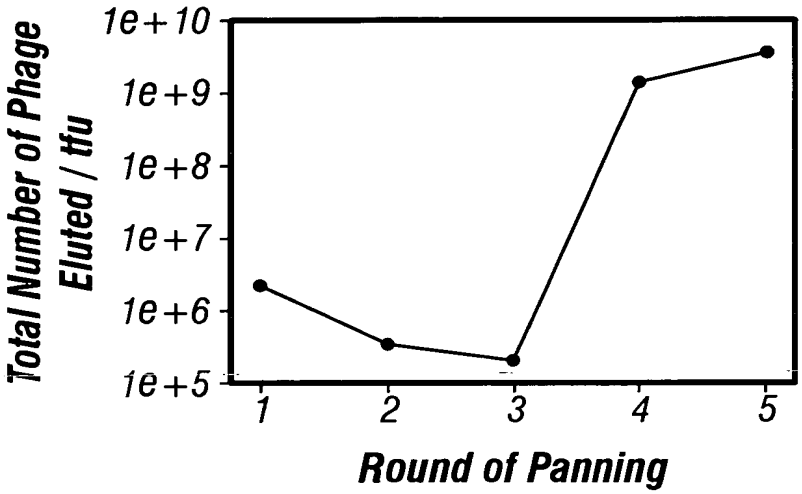

FIG. 6A

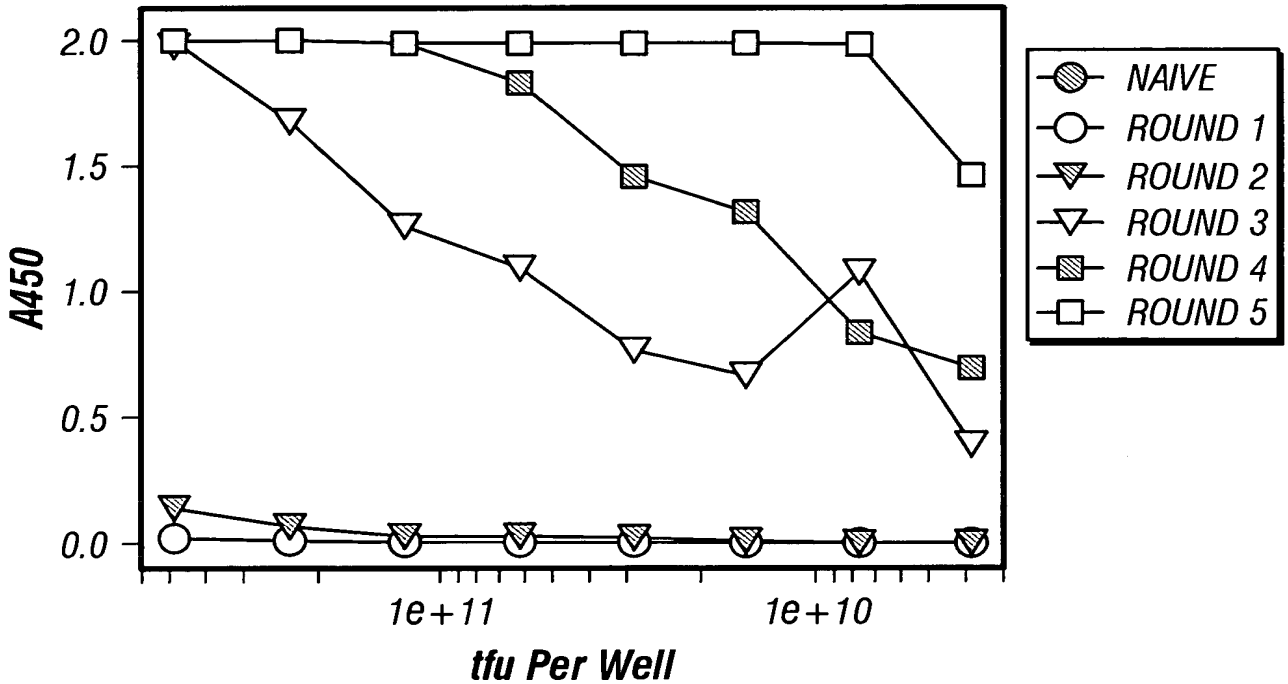

FIG. 6B

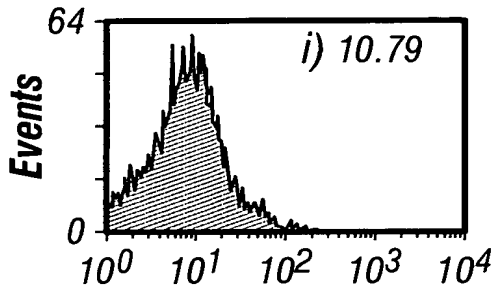

FIG. 6C-1

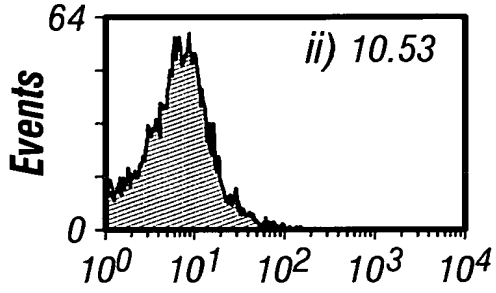

FIG. 6C-2

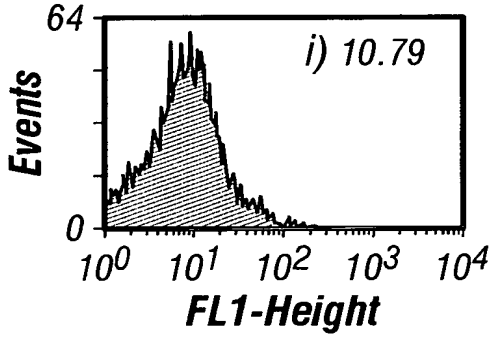

FIG. 6C-3

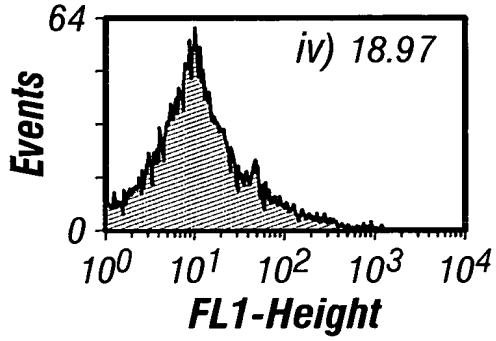

FIG. 6C-4

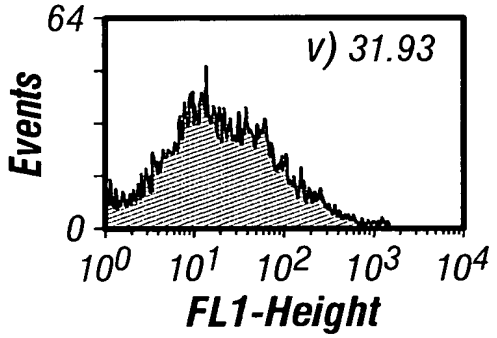

FIG. 6C-5

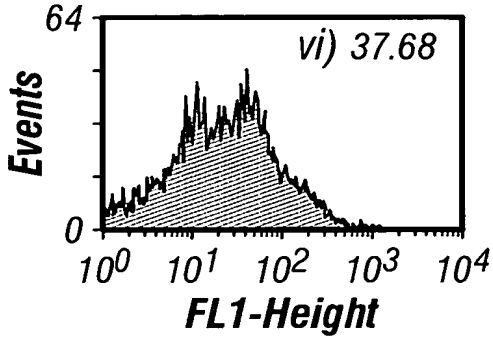

FIG. 6C-6

```
                                                10
GlnValGlnLeuLeuGlnSerAlaAlaGluValLysLysProGlyGluSerLeuLys
CAGGTGCAGCTGTTGCAGTCTGCAGCAGAGGTGAAAAAGCCCGGGGAGTCTCTGAAG
             G AG     GG G  GCT  GTC     T  A G   C    GA
            ValGlu   GlyGlyGlyLeuVal          Gly      Arg

20                                  30     CDR1
IleSerCysLysGlySerGlyTyrSerPheThrSerTyrTrpIleGlyTrpValArg
ATCTCCTGTAAGGGTTCTGGATACAGCTTTACCAGCTACTGGATCGGCTGGGTGCGC
C        GCA CC       T  C   C GTGA     AC  GA      A C
Leu      AlaAla      PheThr   SerAsp   TyrMetSer    Ile

   40                                          52a
GlnMetProGlyLysGlyLeuGluTrpMetGlyIleIleTyrProGlyAspSerAsp
CAGATGCCCGGGAAAGGCCTGGAGTGGATGGGGATCATCTATCCTGGTGACTCTGAT
   GCT  A     G  G          G TTCATAC  TAG AG A   GTAGTACC
   Ala                     ValSerTyr   SerSerSerGly   Thr

         CDR2                    70
ThrArgTyrSerProSerPheGlnGlyGlnValThrIleSerAlaAspLysSerIle
ACCAGATACAGCCCGTCCTTCCAAGGCCAGGTCACCATCTCAGCCGACAAGTCCATC
 TATAC   GCAGAC  TG GA G    GAT          CAGG     CG   AG
IleTyr   AlaAsp   ValLys   ArgPhe         Arg   AsnAlaLys

            80      82a b  c                      90
SerThrAlaTyrLeuGlnTrpSerSerLeuLysAlaSerAspThrAlaValTyrTyr
AGCACCGCCTACCTGCAGTGGAGCAGCCTGAAGGCCTCGGACACGGCCGTGTATTAC
 A T ACTG  T     AAT  A        GA   GA
AsnSerLeu         MetAsn      Arg   Glu

                CDR3                              110
CysAlaArgAlaSerProSerGlyPheAspTyrTrpGlyGlnGlyThrLeuValThr
TGTGCAAGAGCTTCTCCTTCGGGGTTTGACTATTGGGGCCAAGGTACCCTGGTCACC
         ACGGG TT C
         ThrGlyPhePro
               A G AT
               ThrTyr

ValSerSer
GTCTCGAGT
```

FIG. 7A

```
                                                                    20
CAGTCTGTGCTGACTCAGCCACCCTCAGCGTCTGGGACCCCCGGGCAGAGGGTCACC
GlnSerValLeuThrGlnProProSerAlaSerGlyThrProGlyGlnArgValThr

                    CDR1    31  a  b
ATCTCTTGTTCTGGAAGCAGCTCCAACATCGGAAGTAATTATGTATACTGGTACCAG
IleSerCysSerGlySerSerSerAsnIleGlySerAsnTyrValTyrTrpTyrGln

      40                                              CDR2
CAGCTCCCAGGAACGGCCCCCAAACTCCTCATCTATAGGAATAATCAGCGGCCCTCA
GlnLeuProGlyThrAlaProLysLeuLeuIleTyrArgAsnAsnGlnArgProSer

         60                                  70
GGGGTCCCTGACCGATTCTCTGGCTCCAAGTCTGGCACCTCAGCCTCCCTGGCCATC
GlyValProAspArgPheSerGlySerLysSerGlyThrSerAlaSerLeuAlaIle

            80                                          CDR3
AGTGGGCTCCGGTCCGAGGATGAGGCTGATTATTACTGTGCAGCATGGGATGACAGC
SerGlyLeuArgSerGluAspGluAlaAspTyrTyrCysAlaAlaTrpAspAspSer

95  a  b       100
CTGCGGGCTGTTGTATTCGGCGGAGGGACCAAGCTGACCGTCCTA
LeuArgAlaValValPheGlyGlyGlyThrLysLeuThrValLeu
   G   G CC
   GlyGlyPro
    CTCG ---
   ProArg---
```

FIG. 7B

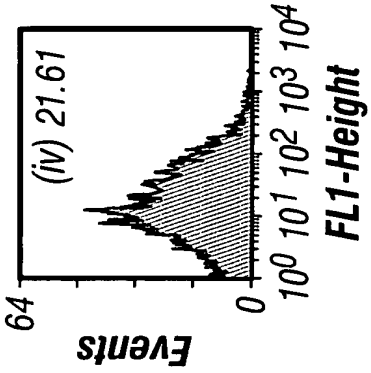

FIG. 8A

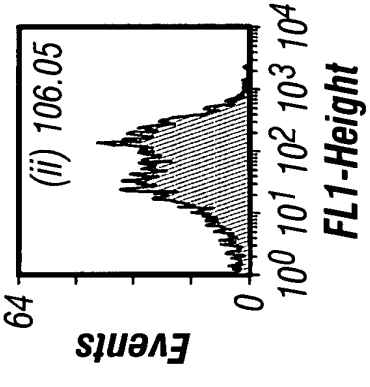

FIG. 8B

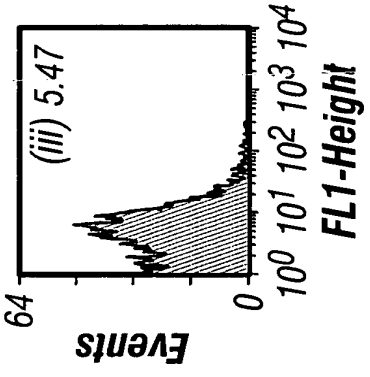

FIG. 8C

FIG. 8D

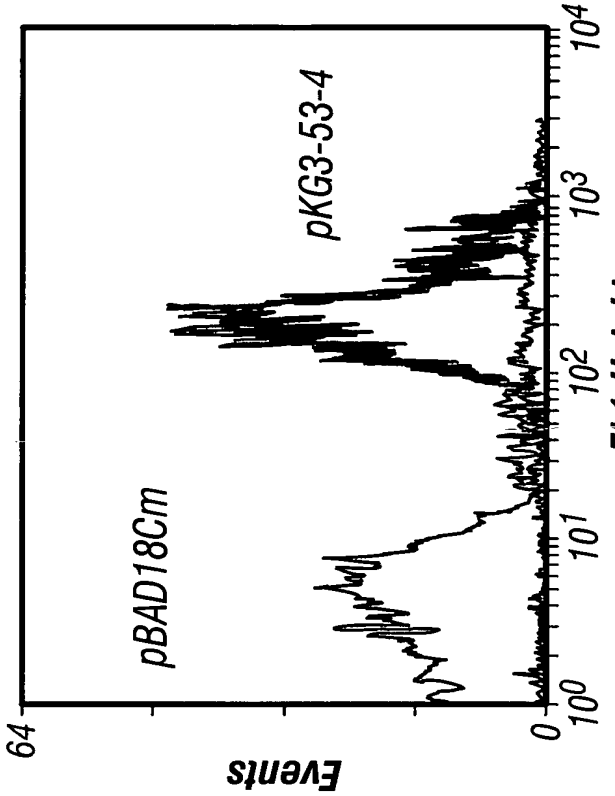

FIG. 9B

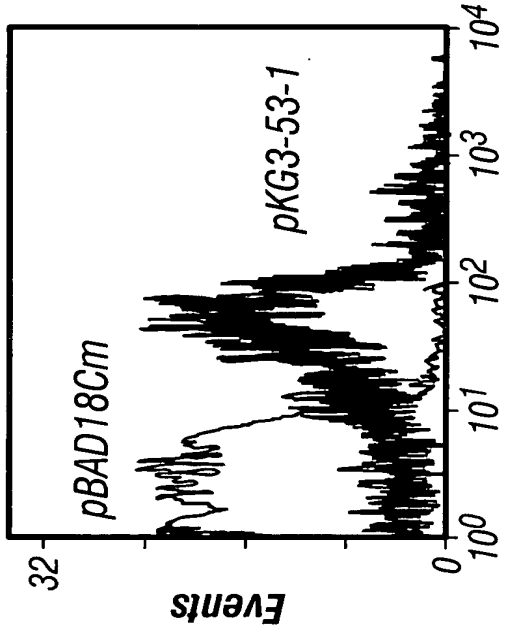

FIG. 9A